

**ICT AS INQUIRY – ORIENTED APPROACH TO ENHANCE TEACHING,
LEARNING, ATTITUDE AND THINKING SKILLS
TOWARDS SCIENCE AT RURAL SCHOOLS**

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**A project report submitted in partial fulfillment of the requirements for the degree
of Master of Education (Curriculum and Instruction)**

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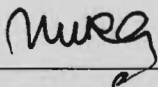
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Thank you.

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ABSTRACT

The purpose of this study was to investigate ICT as inquiry-oriented approach to enhance thinking skills, attitude towards teaching and learning science at rural schools. Level of ICT usage, level of knowledge in ICT, teachers and students attitude and impact of ICT usage in understanding the concepts in science lesson have also been investigated. The study also investigates teachers and students attitude and motivation towards the use of computer in science classroom.

The respondents in this study were thirty Science teachers and seventy pupils from year 3 to year 5. Seven rural schools of Zone 7, Semanggol were involved in this study. The schools are located in Kerian district. The data collection methods used in this study were sets of questionnaires and interviews to find the obstacles in ICT usage and observation of pupils work and presentation. The data in this study was analyzed by using SPSS 14.0 software (Statistical Packages for Social Science) and presented in the form of frequency and percentage, mean and standard deviation. The findings of this study were illustrated that most of the teachers and students have positive attitude towards the use of ICT in science classroom. Also, this study was proved that students have high motivation when computers were used in Science learning classroom. Through this study, it could be concluded that the use of ICT as inquiry-oriented approach in science classroom should be encouraged because it helps to motivate students and generate a positive attitude towards Science learning.

ABSTRAK

Kajian ini bertujuan untuk mengkaji penggunaan ICT sebagai inkuiri- penemuan dalam memantapkan kemahiran berfikir dan sikap dalam pengajaran dan pembelajaran Sains di kawasan luar bandar. Tahap penggunaan ICT, tahap pengetahuan guru dan murid, serta sikap guru dan murid terhadap penggunaan ICT dan keberkesanan serta impak penggunaan ICT dalam subjek Sains juga diberi tumpuan dalam kajian ini. Sikap dan motivasi guru serta pelajar terhadap penggunaan ICT dalam pengajaran dan pembelajaran Sains juga dikenalpasti.

Dalam kajian ini, sampel responden adalah tiga puluh orang guru sains dan tujuh puluh pelajar tahun 3,4,5 dari tujuh buah sekolah luar bandar di. Kelompok 7 , Semanggol. Tujuh buah sekolah tersebut terletak di Daerah Kerian. Metodologi yang digunakan dalam kajian ini adalah set borang soal selidik untuk guru dan murid, temuramah dan kaedah pemerhatian terhadap kerja dan persembahan "PowerPoint" murid. Data yang diperolehi telah dikaji dan dianalisis menggunakan SPSS 14.0 (Statistical Packages for Social Science) dan ianya dipersembahkan dalam bentuk kekerapan dan peratusan. Keputusan kajian ini membuktikan bahawa guru dan pelajar menunjukkan sikap yang positif terhadap penggunaan ICT sebagai inkuiri-penemuan dalam memantapkan kemahiran berfikir serta sikap di dalam proses pengajaran dan pembelajaran sains di sekolah luar bandar. Selain itu, kajian ini membuktikan bahawa pelajar menunjukkan tahap motivasi yang tinggi apabila ICT digunakan di dalam proses pengajaran dan pembelajaran Sains. Kesimpulannya, penggunaan ICT di dalam proses pengajaran dan pembelajaran perlu digalakkan kerana ia membantu menyuntik motivasi guru serta pelajar dan mewujudkan sikap yang positif terhadap pembelajaran subjek Sains.

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CHAPTER 1

INTRODUCTION

INTRODUCTION

The Malaysian government has introduced various initiatives to facilitate greater integration of information and communication technology (ICT) to enhance the effectiveness of education and training programmes in Science. This was outlined in the country's ICT Master Plan, finalized in 2001. The long-term vision of the plan, Vision 2020, calls for sustained, productivity-driven growth, possible only with a technologically literate, critically thinking workforce, prepared to participate fully in the global economy of the 21st century. This vision can be implemented through inquiry-oriented science by using innovative ICT.

In line with the country's information and communication technology (ICT) master plan and vision 2020, which envisages its longer-term development, Malaysia recognizes that the transformation of its education system is fundamental to achieving its objectives. The Ministry of Education, with the participation of non-governmental agencies, is

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